AUTHOR INDEX

Bleha, W. P., Optical to optical image conversion with the liquid crystal light valve, 179
Bomberger, W. D., Integrated optical logic devices, 23
Bowden, Charles M., Cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, 276
Braatz, P. O., Silicon liquid crystal light valves for optical-data processing, 196
Bryan, D. A., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Buckman, A. B., Mode selection with a three-layer dielectric rib waveguide, 74
Busch, J. R., Applications of the integrated optical light modulator, 87
Casasent, David, Interfacing a focal plane infrared mosaic array and an optical processor, 185
Castro, C. A., HgCdTe liquid phase epitaxy: an overview, 262
Caulfield, H. J., Space-invariant composite matched filters for space-variant processors, 164
Caulton, M., Silicon technology applicable to monolithic millimeter-wave sources, 226
Chang, David C., Radiation loss from a dielectric channel waveguide bend, 101
Chen, B., Integrated optical logic devices, 23
Chen, R. T., Liquid encapsulated Czochralski growth of low dislocation GaAs, 234
Chubb, C. R., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Clifton, Brian J., Receiver technology for the millimeter and submillimeter wave regions, 339
Coleman, Paul D., Real space transfer electron device oscillator—a new candidate for the near millimeter range, 333
Conroy, J. J., Recent developments in infrared acousto-optic tunable filters, 123
Cox, N. Walter, Application of molecular beam epitaxy to microwave and millimeter wave devices, 325
Cressman, P. J., Optical damage resistance of lithium niobate waveguides, 47
Dalke, E. A., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Davies, William O., Optics in ballistic missile defense, 2
DeFonzo, A. P., Millimeter-wave integrated circuit devices based on optoelectronic control, 219
Derstine, M. W., Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Duthie, J. G., Multiplex holographic filtering through contact screens, 144
Efron, U., Silicon liquid crystal light valves for optical-data processing, 196
Efurd, R. B., Fiber optic pulse compression concept for processing wide bandwidth radar signals, 286
Erickson, L. Peter, Impact of molecular beam epitaxy on millimeter wave and optical systems, 268
Evans, Kenneth C., Future directions in fire support weapons, 365
Feichtner, J. D., Recent developments in infrared acousto-optic tunable filters, 123
Figueroa, Luis, GHz bandwidth (GaAl)As semiconductor lasers and optical detectors for signal processing applications, 99
Findakly, T., Integrated optical logic devices, 23
Fowler, Bruce W., Future directions in close combat, 356
Gagliano, J. A., Multispectral radiation detection of small changes in target emissivity, 320
Gasparian, G. A., Components for angular division multiplexing, 173
Gavanis, T. J., Visible and infrared waveguiding in proton implanted n-type GaP, 108
Gibbs, H. M., Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Gombar, A., Silicon technology applicable to monolithic millimeter-wave sources, 226
Gottleib, M., Recent developments in infrared acousto-optic tunable filters, 123
Grinberg, J., Silicon liquid crystal light valves for optical-data processing, 196
Guenther, B. D., Plea for synergism, 10
Harrison, Gordon R., Hexagonal ferrites for millimeter wave applications, 257
Herskowitz, G. J., Components for angular division multiplexing, 173
Hester, Charles F., Interfacing a focal plane infrared mosaic array and an optical processor, 185
Holder, D. W., Optical fiber data link for missile guidance, 136
Holland, Robert, Radiation loss from a dielectric channel waveguide bend, 101
Holman, R. L., Optical damage resistance of lithium niobate waveguides, 47
Holmes, D. E., Liquid encapsulated Czochralski growth of low dislocation GaAs, 234
Hopf, F. A., Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Hunsperger, R. G., Visible and infrared waveguiding in proton implanted n-type GaP, 108
Hutcheson, L. D., Design criteria for integrated optical devices, 32
Itoh, Tatsuo, Recent advances in dielectric millimeter-wave integrated circuits, 211
Janton, W., Silicon technology applicable to monolithic millimeter-wave sources, 226
Jenkinson, H. A., Visible and infrared waveguiding in proton implanted n-type GaP, 108
Johnson, J., Multiplex holographic filtering through contact screens, 144
Kaplan, A. E., Switching of reflection of light at nonlinear interfaces, 305
Kaplan, D. L., Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Kenan, R. P., Applications of the integrated optical light modulator, 87
Kirkpatrick, C. G., Liquid encapsulated Czochralski growth of low dislocation GaAs, 234
Kobrinski, H., Components for angular division multiplexing, 173
Korenstein, R., HgCdTe liquid phase epitaxy: an overview, 262
Kuester, Edward F., Radiation loss from a dielectric channel waveguide bend, 101
Lawrence, Anthony, Integrated optics elements for an optical gyro, 80
Lee, Chi H., Millimeter-wave integrated circuit devices based on optoelectronic control, 219
Leib, Kenneth G., Multiple filter storage, 148
Little, M. J., Silicon liquid crystal light valves for optical-data processing, 196
Liu, H. K., Multiplex holographic filtering through contact screens, 144
Magee, C. W., Silicon technology applicable to monolithic millimeter-wave sources, 226
Mak, P. S., Millimeter-wave integrated circuit devices based on optoelectronic control, 219
Malik, R. J., Planar doped barriers by molecular beam epitaxy for millimeter wave devices, 243
Mendelsohn, Jay, Multiple filter storage, 148
Mentzer, M. A., Visible and infrared waveguiding in proton implanted n-type GaP, 108
Mink, J. W., Plea for synergism, 10
Monahan, M. A., Silicon liquid crystal light valves for optical-data processing, 196
Muha, Michael S., Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Neikirk, Dean P., Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Nettle, V. H., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Newton, J. M., Multispectral radiation of small changes in target emissivity, 320
Normandin, R., Picosecond signal processing with planar nonlinear integrated optics, 291

O'Clock, George D., Jr., Impact of molecular beam epitaxy on millimeter wave and optical systems, 268
Park, Hyeon, Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Peterson, Donald R., Future directions in air defense, 370
Pittman, William C., Potential of integrated optics and integrated millimeter and microwave circuits for future MICOM systems, 350
Powell, R. B., Optical fiber data link for missile guidance, 136
Powers, J. K., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Ramer, O. Glenn, Single-mode fiber-to-channel waveguide coupling, 39
Rausch, E. O., Fiber optic pulse compression concept for processing wide bandwidth radar signals, 286
Reed, W. R., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Rice, R. R., Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Robusto, P. F., Optical to optical image conversion with the liquid crystal light valve, 179
Rosen, A., Silicon technology applicable to monolithic millimeter-wave sources, 226
Rutledge, David B., Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Sarid, Dror, Intrinsic bistable guided-wave devices: theory and applications, 132
Schuchardt, J. M., Multispectral radiation detection of small changes in target emissivity, 320
Schwarz, S. E., Integrated-optical techniques for near-millimeter-wave technology, 204
Shoemaker, R. L., Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Sitton, R. L., Optical Command and Beamrider missile guidance, 358
Skeldon, Mark D., Design approach for a thermally compensated injection laser stack transmitter/receiver, 112
Smith, P. W., Switching of reflection of light at nonlinear interfaces, 305
Soffer, B. H., Silicon liquid crystal light valves for optical-data processing, 196
Stabile, P., Silicon technology applicable to monolithic millimeter-wave sources, 226
Stegeman, G. I., Picosecond signal processing with planar nonlinear integrated optics, 291
Sung, C. C., Cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, 276
Tomlinson, W. J., Switching of reflection of light at nonlinear interfaces, 305
Tsang, W. T., Novel optoelectronic devices prepared by molecular beam epitaxy, 66
Verber, C. M., Applications of the integrated optical light modulator, 87
Walker, Clifford G., Integrated optics strapdown inertial system, 16
Wandinger, L., Millimeter wave integrated circuits for communications and radar applications, 312
Wang, Shyh, Novel semiconductor lasers for integrated optics, 93
Wright, J. H., Optical fiber data link for missile guidance, 136
Wu, C. P., Silicon technology applicable to monolithic millimeter-wave sources, 226
Yu, Chang-Xuan, Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Zavada, J. M., Visible and infrared waveguiding in proton implanted n-type GaP, 108

SUBJECT INDEX

Acousto-optic tunable filters, recent developments in infrared, 123
Air defense, future directions in, 370
Angular division multiplexing, components for, 173
Antenna arrays, progress in millimeter-wave integrated-circuit imaging, 206
Application of molecular beam epitaxy to microwave and millimeter wave devices, 325
Applications of the integrated optical light modulator, 87
Array and an optical processor, interfacing a focal plane infrared mosaic, 185
Arrays, progress in millimeter-wave integrated-circuit imaging antenna, 206

Ballistic missile defense (BMD), optics in, 2
Beamrider missile guidance, Optical Command and, 358
Bistability, cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical, 276
Bistability: possible guided-wave all-optical square-wave oscillators, periodic oscillations and chaos in optical, 297
Bistable guided-wave devices: theory and applications, intrinsic, 132

Chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, periodic oscillations and, 297
Close combat, future directions in, 358
Coherent field: relation to intrinsic mirrorless optical bistability, cooperative transients in inter-atomic correlation in the presence of an externally applied, 276
Command and Beamrider missile guidance, Optical, 358
Communications and radar applications, millimeter wave integrated circuits for, 312
Components for angular division multiplexing, 173
Compression concept for processing wide bandwidth radar signals, fiber optic pulse, 286
Conversion with the liquid crystal light valve, optical to optical image, 179
Cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, 276
Correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, cooperative transients in inter-atomic, 276
Coupling, single-mode fiber-to-channel waveguide, 39
Czochralski growth of low dislocation GaAs, liquid encapsulated, 234

Damage resistance of lithium niobate waveguides, optical, 47
Design approach for a thermally compensated injection laser stack transmitter/receiver, 112
Design criteria for integrated optical devices, 32
Detection of small changes in target emissivity, multispectral radiation, 320
Development of the multiwavelength monolithic integrated fiber optics terminal, 58
Doped barriers by molecular beam epitaxy for millimeter wave devices, planar, 243

Electron device oscillator—a new candidate for the near millimeter range, real space transfer, 333
Emissivity, multispectral radiation detection of small changes in target, 320
Epitaxy to microwave and millimeter wave devices, application of molecular beam, 325
Epitaxy for millimeter wave devices, planar doped barriers by molecular beam, 243
Epitaxy, novel optoelectronic devices prepared by molecular beam, 66
Epitaxy: an overview, HgCdTe liquid phase, 262

Ferrites for millimeter wave applications, hexagonal, 251
Fiber-to-channel waveguide coupling, single-mode, 39
Fiber data link for missile guidance, optical, 136

Fiber optic pulse compression concept for processing wide bandwidth radar signals, 286
Fiber optics terminal, development of the multiwavelength monolithic integrated, 58
Filter storage, multiple, 148
Filtering through contact screens, multiplex holographic, 144
Filters, recent developments in infrared acousto-optic tunable, 123
Filters for space-variant processors, space-invariant composite matched, 164
Fire support weapons, future directions in, 365
Focal plane infrared mosaic array and an optical processor, interfacing a, 185
Future directions in air defense, 370
Future directions in close combat, 356
Future directions in fire support weapons, 365

(GaAℓ)As semiconductor lasers and optical detectors for signal processing applications, GHz bandwidth, 99
GaAs, liquid encapsulated Czochralski growth of low dislocation, 234
GaP, visible and infrared waveguiding in proton implanted n-type, 108
GHz bandwidth (GaAℓ) semiconductor lasers and optical detectors for signal processing applications, 99
Guidance, Optical Command and Beamrider missile, 358
Guided-wave all-optical square-wave oscillators, periodic oscillations and chaos in optical bistability: possible, 297
Guided-wave devices: theory and applications, intrinsic bistable, 132
Gyro, integrated optics elements for an optical, 80

HgCdTe liquid phase epitaxy: an overview, 262
Hexagonal ferrites for millimeter wave applications, 251
Holographic filtering through contact screens, multiplex, 144

Image conversion with the liquid crystal light valve, optical to optical, 179
Imaging antenna arrays, progress in millimeter-wave integrated-circuit, 206
Impact of molecular beam epitaxy on millimeter wave and optical systems, 268
Inertial system, integrated optics strapdown, 16
Infrared acousto-optic tunable filters, recent developments in, 123
Infrared mosaic array and an optical processor, interfacing a focal plane, 185
Infrared waveguiding in proton implanted n-type GaP, visible and, 108
Integrated circuit devices based on opto-electronic control, millimeter-wave, 219
Integrated-circuit imaging antenna arrays, progress in millimeter-wave, 206
Integrated circuits for communications and radar applications, millimeter wave, 312
Integrated fiber optics terminal, development of the multiwavelength monolithic, 58
Integrated optical devices, design criteria for, 32
Integrated optical light modulator, applications of the, 87
Integrated optical logic devices, 23
Integrated-optical techniques for near-millimeter-wave technology, 204
Integrated optics elements for an optical gyro, 80
Integrated optics and integrated millimeter and microwave circuits for future MICOM systems, potential of, 350
Integrated optics, novel semiconductor lasers for, 93
Integrated optics, picosecond signal processing with planar nonlinear, 291
Integrated optics strapdown inertial system, 16
Inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, cooperative transients in, 276
Interfacing a focal plane infrared mosaic array and an optical processor, 185
Intrinsic bistable guided-wave devices: theory and applications, 132

Laser stack transmitter/receiver, design approach for a thermally compensated injection, 112
Lasers for integrated optics, novel semiconductor, 93
Lasers and optical detectors for signal processing applications, GHz bandwidth (GaAℓ)As semiconductor, 99
Light modulator, applications of the integrated optical, 87
Light at nonlinear interfaces, switching of reflection of, 305
Link for missile guidance, optical fiber data, 136
Liquid crystal light valve, optical to optical image conversion with the, 179
Liquid crystal light valves for optical-data processing, silicon, 196
Liquid encapsulated Czochralski growth of low dislocation GaAs, 234
Liquid phase epitaxy: an overview, HgCdTe, 262
Lithium niobate waveguides, optical damage resistance of, 47
Logic devices, integrated optical, 23

MICOM systems, potential of integrated optics and integrated millimeter and microwave circuits for future, 350
Microwave circuits for future MICOM systems, potential of integrated optics and integrated millimeter and, 350
Microwave and millimeter wave devices, application of molecular beam epitaxy to, 325
Millimeter and microwave circuits for future MICOM systems, potential of integrated optics and integrated, 350
Millimeter and submillimeter wave regions, receiver technology for the, 339
Millimeter wave applications, hexagonal ferrites for, 251
Millimeter wave devices, application of molecular beam epitaxy to microwave and, 325
Millimeter wave devices, planar doped barriers by molecular beam epitaxy for, 243
Millimeter-wave integrated circuit devices based on optoelectronic control, 219
Millimeter-wave integrated-circuit imaging antenna arrays, progress in, 206
Millimeter-wave integrated-circuit imaging antenna arrays, progress in, 206
Millimeter wave integrated circuits for communications and radar applications, 312
Millimeter-wave integrated circuits, recent advances in dielectric, 211
Millimeter wave and optical systems, impact of molecular beam epitaxy on, 268
Millimeter-wave sources, silicon technology applicable to monolithic, 226
Millimeter-wave technology, integrated-optical techniques for near-, 204
Mirrorless optical bistability, cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic, 276
Missile defense (BMD), optics in ballistic, 2
Missile guidance, Optical Command and Beamrider, 358
Missile guidance, optical fiber data link for, 136
Mode selection with a three-layer dielectric rib waveguide, 74
Molecular beam epitaxy to microwave and millimeter wave devices, application of, 325
Molecular beam epitaxy for millimeter wave devices, planar doped barriers by, 243
Molecular beam epitaxy on millimeter wave and optical systems, impact of, 268
Molecular beam epitaxy, novel optoelectronic devices prepared by, 66
Monolithic integrated fiber optics terminal, development of the multiwavelength, 58
Monolithic millimeter-wave sources, silicon technology applicable to, 226
Mosaic array and an optical processor, interfacing a focal plane infrared, 185
Multiple filter storage, 148
Multiplex holographic filtering through contact screens, 144
Multiplexing, components for angular division, 173
Multispectral radiation detection of small changes in target emissivity, 320
Multiwavelength monolithic integrated fiber optics terminal, development of the, 58

Near millimeter range, real space transfer electron device oscillator—a new candidate for the, 333
Near-millimeter-wave technology, integrated-optical techniques for, 204
Nonlinear integrated optics, picosecond signal processing with planar, 291
Nonlinear interfaces, switching of reflection of light at, 305
Novel optoelectronic devices prepared by molecular beam epitaxy, 66
Novel semiconductor lasers for integrated optics, 93

Optical bistability, cooperative transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless, 276
Optical bistability: possible guided-wave all-optical square-wave oscillators, periodic oscillations and chaos in, 297
Optical Command and Beamrider missile guidance, 358
Optical damage resistance of lithium niobate waveguides, 47
Optical-data processing, silicon liquid crystal light valves for, 196
Optical detectors for signal processing applications, GHz bandwidth (GaAℓ)As semiconductor lasers and, 99
Optical devices, design criteria for integrated, 32
Optical fiber data link for missile guidance, 136
Optical gyro, integrated optics elements for an, 80
Optical light modulator, applications of the integrated, 87
Optical logic devices, integrated, 23
Optical to optical image conversion with the liquid crystal light valve, 179
Optical processor, interfacing a focal plane infrared mosaic array and an, 185
Optical systems, impact of molecular beam epitaxy on millimeter wave and, 268
Optical techniques for near-millimeter-wave technology, integrated-, 204
Optics in ballistic missile defense (BMD), 2
Optics elements for an optical gyro, integrated, 80
Optics and integrated millimeter and microwave circuits for future MICOM systems, potential of integrated, 350
Optics, novel semiconductor lasers for integrated, 93
Optics, picosecond signal processing with planar nonlinear integrated, 291
Optics strapdown inertial system, integrated, 16
Optoelectronic control, millimeter-wave integrated circuit devices based on, 219
Optoelectronic devices prepared by molecular beam epitaxy, novel, 66
Oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, periodic, 297
Oscillator—a new candidate for the near millimeter range, real space transfer electron device, 333
Oscillators, periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave, 297

Periodic oscillations and chaos in optical bistability: possible guided-wave all-optical square-wave oscillators, 297
Picosecond signal processing with planar nonlinear integrated optics, 291
Planar doped barriers by molecular beam epitaxy for millimeter wave devices, 243
Planar nonlinear integrated optics, picosecond signal processing with, 291
Plea for synergism, 10
Potential of integrated optics and integrated millimeter and microwave circuits for future MICOM systems, 350
Processor, interfacing a focal plane infrared mosaic array and an optical, 185
Processors, space-invariant composite matched filters for space-variant, 164
Progress in millimeter-wave integrated-circuit imaging antenna arrays, 206
Proton implanted n-type GaP, visible and infrared waveguiding in, 108
Pulse compression concept for processing wide bandwidth radar signals, fiber optic, 286

Radar applications, millimeter wave integrated circuits for communications and, 312
Radar signals, fiber optic pulse compression for processing wide bandwidth, 286
Radiation detection of small changes in target emissivity, multispectral, 320
Radiation loss from a dielectric channel waveguide bend, 101
Real space transfer electron device oscillator—a new candidate for the near millimeter range, 333
Receiver, design approach for a thermally compensated injection laser stack transmitter/, 112
Receiver technology for the millimeter and submillimeter wave regions, 339
Recent advances in dielectric millimeter-wave integrated circuits, 211
Recent developments in infrared acousto-optic tunable filters, 123
Reflection of light at nonlinear interfaces, switching of, 305

Screens, multiplex holographic filtering through contact, 144
Semiconductor lasers for integrated optics, novel, 93
Semiconductor lasers and optical detectors for signal processing applications, GHz bandwidth (GaAℓ)As, 99
Signal processing applications, GHz bandwidth (GaAℓ)As semiconductor lasers and optical detectors for, 99
Signal processing with planar nonlinear integrated optics, picosecond, 291
Silicon liquid crystal light valves for optical-data processing, 196
Silicon technology applicable to monolithic millimeter-wave sources, 226
Single-mode fiber-to-channel waveguide coupling, 39
Space-invariant composite matched filters for space-variant processors, 164
Space transfer electron device oscillator—a new candidate for the near millimeter range, real, 333
Space-variant processors, space-invariant composite matched filters for, 164
Square-wave oscillators, periodic oscillations and chaos in optical bistability: possible guided-wave all-optical, 297
Stack transmitter/receiver, design approach for a thermally compensated injection laser, 112
Storage, multiple filter, 148
Strapdown inertial system, integrated optics, 16
Submillimeter wave regions, receiver technology for the millimeter and, 339
Switching of reflection of light at nonlinear interfaces, 305
Synergism, plea for, 10

Target emissivity, multispectral radiation detection of small changes in, 320
Terminal, development of the multiwavelength monolithic integrated fiber optics, 58
Transients in inter-atomic correlation in the presence of an externally applied coherent field: relation to intrinsic mirrorless optical bistability, cooperative, 276
Transmitter/receiver, design approach for a thermally compensated injection laser stack, 112
Tunable filters, recent developments in infrared acousto-optic, 123

Visible and infrared waveguiding in proton implanted n-type GaP, 108

Waveguide bend, radiation loss from a dielectric channel, 101
Waveguide coupling, single-mode fiber-to-channel, 39
Waveguide, mode selection with a three-layer dielectric rib, 74
Waveguiding in proton implanted n-type GaP, visible and infrared, 108
Waveguides, optical damage resistance of lithium niobate, 47
Weapons, future directions in fire support, 365
Wide bandwidth radar signals, fiber optic pulse compression for processing, 286